FACT SHEET

United State Environmental Protection Agency
Region 10
1200 Sixth Avenue, OW-130
Seattle, Washington 98101

(206) 553-1214

Permit No.: AK-004951-4

PROPOSED MODIFICATION OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE POLLUTANTS PURSUANT TO PROVISIONS OF THE CLEAN WATER ACT (CWA) FOR ECHO BAY ALASKA, INC., A.J. MINE.

This fact sheet includes (a) the tentative determination of the Environmental Protection Agency (EPA) to modify the permit, (b) information on public comment, public hearings and appeal, and (c) the conditions and requirements contained in the modification.

Persons wishing to comment on the modifications contained in the proposed permit may do so before the expiration date of the Public Notice. Only the modifications are open to public comment. All written comments should be submitted to EPA as described in the Public comments Section of the attached Public Notice.

After the expiration date of the Public Notice, the Director, Office of Water, will make final determinations with respect to issuance of the modified permit. The tentative determinations contained in the proposed permit will become final conditions if no substantive comments are received during the public comment period.

The proposed NPDES permit and other related documents are on file and may be inspected at the above address any time between 8:30 a.m. and 4:00 p.m., Monday through Friday. Copies and other information may be requested by writing to the EPA at the above address to the attention of the NPDES Permits Unit, or by calling (206) 553-1214 or 1-800-424-4372 (within Region 10 only). The fact sheet and draft permit are also available at:

EPA Alaska Operations Office, Room 537
Federal Bldg.
222 W. 7th Avenue, #19
Anchorage, Alaska 99513-7588

EPA Alaska Operations Office
410 Willoughby Avenue
Juneau, Alaska 99801-1795

Alaska Department of Environmental Conservation
410 Willoughby Avenue, Suite 105
Juneau, Alaska 99801-1795

The draft permit and fact sheet can also be found by visiting the Region 10 website at www.epa.gov/r10earth/offices/water/npdes.htm. To ensure effective communication, additional services can be made available to persons with disabilities by contacting EPA at one of the above addresses.

To ensure effective communication, additional services can be made available to persons with disabilities by contacting one of the above representatives. For those with impaired hearing or speech, please contact EPA's telecommunication device for the deaf (TDD) at (206) 553-1598.

TECHNICAL INFORMATION

1. SUMMARY OF MODIFICATIONS

The intent of this proposed modification of the permit is to address concerns raised in a permit appeal filed May 1, 1998 by Alaskans for Juneau. As a result of the permit appeal, information was presented that had not been available at the time the permit was being developed. As a result of subsequent negotiations, the permittee submitted a modification request according to the requirements of 40 CFR Part 124.5 for the reasons specified in 40 CFR Part 122.62. The permit appeal was withdrawn on June 15, 1998. In addition, Kvaerner Environmental, on behalf of Echo Bay (EB), submitted a revised Best Management Practices (BMP) Plan. Renumbering of Permit Parts, where necessary, has been done without being noted.

2. DESCRIPTION OF THE INDUSTRY

Echo Bay Exploration, Inc. conducted exploration activities at the A-J Mine located near Juneau, Alaska. The company originally proposed to re-open the mine. The A-J mine is a historic producer of lode gold. Past operation processed a total of 100 million tons of low grade ore until 1944. Mine reserves were anticipated to provide at least a 13 year mine life at a mining rate of 22,500 tons per day.

The AJ Mine has various existing stopes and historic workings which are open to the surface (roughly 80 acres). Accumulated precipitation in various forms infiltrates and percolates through these open areas into the mine. During the exploration phase of the mine, EB routed this water to prevent contact with working areas of the mine and routed water from their exploration activities into a section of the mine called the Deep Workings.

The company applied for a permit for discharges from the Gold Creek Drainage Tunnel on May 23, 1994. The application was amended on October 1, 1994, and again on December 28, 1994. The application was further updated February 4, 1997. Since that time, EB proceeded with closure of the mine, with Kvaerner Environmental conducting closure activities on behalf of EB.

3. RECEIVING WATER

Gold Creek and Sheep Creek, according to Alaska's Water Quality Standards [18 AAC 70.050(a)(1)], are protected for water supply; water recreation; and growth and propagation of fish, shellfish, other aquatic life and wildlife. Gold

Creek flows through Last Chance Basin which contains the well field that supplies drinking water to the City of Juneau.

4. REGULATORY AUTHORITY

A. State of Alaska Water quality Standards and Limitations

Section 301(b)(1) of the Act requires the establishment of limitations in permits necessary to meet water quality standards by July 1, 1997. All discharges to State waters must comply with State and local coastal management plans, as well as with state water quality standards, including the state's antidegradation policy. Discharges to state waters must also comply with limitations imposed by the state as part of its coastal management program consistency determinations, and of its certification of NPDES permits under section 401 of the Act.

B. Section 308 of the Clean Water Act

Under section 308 of the Act and under 40 CFR Part 122.44(i), the Director must require a discharger to conduct monitoring to determine compliance with effluent limitations and to assist in the development of effluent limitations.

5. SPECIFIC PERMIT CONDITIONS

This modification of the existing permit NPDES Permit No. AK-004951-4 for EB Alaska, A-J Mine, is based on new information developed as a result of the permit appeal as well as the completed Best Management Practices (BMP) Plan.

6. REMOVALS, CHANGES AND ADDITIONS

A. Removal of Language

The previous permit contained language that would have allowed exploration to be conducted at the mine. All references to "Phase 2 (Exploration)" have been deleted from the permit. The following table summarizes the deletions.

Page	Deletion
22, 26, 27, and 28	Sections 1.F.2.(d), (o), (q), (s), and (u), respectively, all references to "Phase 1, Care and Maintenance" were deleted and replaced with "Site Activities."
23	Section 1.F.2.d.(1) "Outfall 001 - Phase 2 (Exploration)" was deleted entirely.
27	Section 1.F.2.d.(p) "Ebner Adit - Phase 2 (Exploration)" was deleted entirely.
27	Section 1.F.2.d.(r) "Alexander Adit - Phase 2 (Exploration)" was deleted entirely.
28	Section 1.F.2.d.(t) "Level '00' - Phase 2 (Exploration)" was deleted entirely.
29	Section 1.F.2.d.(v) "Sheep Creek Adit - Phase 2 (Exploration)" was deleted entirely.
Note: Sections and page numbers refer to sections and page numbers of the current permit.	

B. Changes

Part I of the permit, page 4, was modified to include language clarifying that exploration activities are not authorized under this permit. The language also incorporates section 2.B. of the BMP Plan approved by EPA and ADEC on June 15, 1998.

Based on information submitted as part of the permit appeal, additional parameters of concern, such as acrylamide, were identified. To account for acrylamide and other parameters not currently being monitored, the WET monitoring was revised. In order to more fully characterize effluent from Outfall 002, Part I.B. of the permit, "Whole Effluent Toxicity (WET) Testing" was revised to require WET monitoring at each transition level[1] change rather than just for the first year of the permit.

[1] As part of the closure plan, the Deep North Orebody (DNO) at Outfall 002 will be pumped out to the level it was before exploration activities began. Each level corresponds to a specific depth within the mine. "Transition level" is where a tunnel is intercepted.

Part I.F.1 was revised to show that the BMP plan originally required to be developed has been developed. In addition, language was added to incorporate Section 2.B. of the BMP Plan into the permit. Section 2.B. of the BMP Plan defines what site activities are authorized under the permit. Any changes to this section are subject to approval by EPA and ADEC. The following table summarizes the revisions proposed by this modification.

Page	Change
4	Section I modified to read as follows: "This permit does not authorize the discharge of any wastestreams, including spills and other unintentional or nonroutine discharges of pollutants, that are not part of the normal operation of the facility as disclosed in section II.B.2.a. of the permit application **dated February 11, 1997, which are limited to the Site Activities of Care and Maintenance, Closure Related Tasks, Geological Mapping, Chip Sampling, and Underground and Surface Inspections, as defined in Section 2.B. of the Best Management Practices Plan developed pursuant to Section 1.F.1 of this Permit as approved on June 15, 1998. Access associated with the Site Activities is described in Section 2.B.3 of the Best Management Practices Plan. This permit does not authorize the discharge of** any pollutants that are not ordinarily present in such wastestreams."
7-10	Section I.B. Whole Effluent Toxicity (WET) Testing was rewritten.

Page	Change
13	Section 1.F.1 was revised to read as follows: "The permittee **has developed** a best management practices plan (the Plan) which prevents, or minimizes, the potential for the release of pollutants to waters of the United States through plant site runoff, spillage or leaks, or erosion of all sites. The Plan **has been approved by** EPA and ADEC. The Plan shall be implemented within 60 days of the approval of the Plan. The Plan shall be retained on site and made available to EPA and ADEC upon request. The Plan must be amended whenever **an activity is proposed that is not expressly included in the Site Activities defined in Section 2.B. of the Plan as approved on June 15, 1998 or whenever** there is a change in the facility or in the operation of the facility which materially increases the potential for an increased discharge of pollutants. **A**mendments **to the Plan, other than to Section 2.B.** shall be dated with the effective date of the amendment. **Amendments to Section 2.B. of the Plan shall become effective upon the approval of EPA and ADEC.** The permittee shall notify EPA of the amendment to the plan and submit them with the monthly DMR.
22	Section 1.F.2.d.(k) Outfall 001 - Site Activities was revised to include the following new bullet points at the end of this subsection: • **Limit settling agents to those specifically approved by EPA and ADEC.** • **Remove from the underground portion of the facility any chemicals or similar substances which are no longer being used or required for Site Activities.** • **Conduct turbidity monitoring down gradient of any Site Activity that would discharge to Outfall 001 that involves motorized, wheeled or crawler-type equipment engaged in earth monitoring.**
25	The sixth bullet in Section 1.F.2.d.(n) Outfall 002 - (6-level transition) was revised to read as follows: • **Except for whole effluent toxicity testing**, collect water samples from the pump discharge after 24 hours. Monitor for all constituents in Table 1A, including TAH, oil and grease (no visible sheen), arsenic, iron, lead, manganese, zinc, sulfate, TDS, turbidity, conductivity, TSS, **and Total Aqueous Hydrocarbons (TAqH) (effluent limitation of 15 μg/L).**

Page	Change
26	The following bullet was added after the sixth bullet of Section 1.F.2.d.(n): • **Whole effluent toxicity Testing shall be conducted in accordance with Section I.B.1.d.**
26	The final bullet in Section 1.F.2.d.(n) Outfall 002 - (6-level transition) was revised as follows: • Should additional pumping be necessary to meet lease requirements, pumping will continue from the deep north through the 53 winze using the protocol described for Outfall 002 - Phase 1, until **8** level is reached. The protocol for Phase 2 will then be repeated. Phase 1 and Phase 2 will be repeated at level **9**.
26	The following was added to the end of the third bullet in Section 1.F.2.d.(o) Ebner Site Activities: **", for possible discharge through the Ebner Filter Plant."** The following new bullet point was added at the end of this subsection: • **Limit settling agents to those specifically approved by EPA and ADEC.**
28	The fourth bullet of Section 1.F.2.d.(u) Sheep Creek Adit Site Activities was modified to read as follows: • Use the following methods to control sediment discharge from the Sheep Creek portal when **Site Activities** are undertaken:
Throughout the permit	All "work activities" references were changed to "**Site Activities.**"
Note: Sections and page numbers refer to sections and page numbers of the current permit.	

C. Additions

To clarify the activities authorized under this permit, language was added specifying the types of settling agents that may be used in the mine. A requirement to conduct turbidity monitoring down gradient of any Site Activity that would discharge to Outfall 001 and that involves motorized, wheeled or crawler-type equipment engage in earth moving was added.

A requirement for Total Aqueous Hydrocarbons (TAqH) monitoring was added.

D. Minor Modifications

In addition to modifications proposed above, on June 16, 1998, EPA revised the permit to include minor modifications which corrected typographical errors and added clarifying language. Appendix A describes those minor modifications.

7. OTHER LEGAL REQUIREMENTS

A. Oil Spill Requirements

Section 311 of the Act prohibits the discharge of oil and hazardous materials in harmful quantities. Routine discharges specifically controlled by a permit are excluded from the provisions of section 311. However, this permit does not preclude the institution of legal action or relieve the permittee from any responsibilities, or penalties for other, unauthorized discharges of oil and hazardous materials which are covered by section 311 of the Act.

B. Coastal Zone Management Act

A determination that the activities allowed by this proposed permit are consistent with the Alaska Coastal Management Plan must be made in accordance with the Coastal Zone Management Act before a final permit will be issued.

C. State Water Quality Standards and State Certification

The provisions of section 401 of the Act apply. In accordance with 40 CFR Part 124.01(c)(1), public notice of the proposed permit modification has been provided to the State of Alaska and Alaska state agencies having jurisdiction over fish, shellfish, and wildlife resources, and over coastal zone management plans.

D. Endangered Species Act

Letters were sent to the U.S. Fish and Wildlife Service (USFWS.) and to the National Marine Fisheries Service (NMFS) on August 3,1998,

requesting information to the extent the permit modification may affect threatened and endangered species.

REFERENCES

Letter from Laurie Ferguson Craig to Chuck Clarke, dated June 15, 1998, requesting withdrawal of the request for evidentiary hearing dated April 30, 1998.

Letter from Don Ewigleben to Robert Robichaud dated June 15, 1998, requesting that EPA modify the permit, NPDES Permit No.: AK-004954-1.

Letter from Robert R. Robichaud to William B. Goodhard, dated June 16, 1998, transmitting the final, effective permit, with minor modifications.

Letter from Robert R. Robichaud to William B. Goodhard, dated June 16, 1998, approving the A-J Mine Best Management Practices Plan. (Actually approved June 15, 1998).

A-J Mine Best Management Practices Plan, dated June 11, 1998.

Letter from William D. McGee, ADEC, to Robert R. Robichaud, dated June 11, 1998, approving the a-J Mine and Surface Best Management Practices Plan.

APPENDIX A
MINOR MODIFICATIONS, JUNE 11, 1998

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I. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the effective period of this permit, the Permittee is authorized to discharge from outfalls 001 ~~and 002~~ - 008 subject to the restrictions set forth herein. This permit does not authorize the discharge of any wastestreams, including spills and other unintentional or non-routine discharges of pollutants, that are not part of the normal operation of the facility as disclosed in the permit application, or any pollutants that are not ordinarily present in such wastestreams.

Note on change to page 4 of 53:

Authorizes discharge from Outfalls 001 - 008, as shown on page 1 of 53.

Table 1 - Effluent Limitations Outfall 001				
Parameters	Limits on Daily Discharge		Monitoring Requirements	
	Daily Maximum	Average Monthly	Frequency	Sample Type
Flow	-		Quarterly	Grab
Aluminum	**-**	**-**	**Annual**	**Grab**
Arsenic	-	-	Annual	Grab
Cadmium	100	50	Annual	Grab
Copper	300	150	Annual	Grab
Iron	-	-	Annual	Grab
Lead	19.1	9.5	Quarterly	Grab
Manganese	-	-	Annual	Grab
Mercury, Total	2	1	Annual	Grab
Nickel	-	-	Annual	Grab
Selenium	-	-	Annual	Grab
Silver	-	-	Annual	Grab
Zinc	241.1	170.6	Quarterly	Grab
TAH	**10**	**--**	Quarterly	Grab
TSS, mg/L	30	20	Quarterly	Grab
TDS, mg/L	1170	-	Quarterly	Grab
Turbidity	**-**	**-**	**Monthly**	**Grab**
Sulfate, mg/L	780	-	Quarterly	Grab
Oil & Grease	No visible sheen		Monthly	Grab
pH, Std. Units	6.5 - 8.5		Monthly	Grab

1. Metals measured in Total Recoverable unless noted.
2. Units are μg/L unless noted.
3. Effluent sampling shall occur ~~after the discharge pipe~~ **at the GCDT adit**, prior to flow into Gold Creek.
4. **Ambient, mixing zone confirmation monitoring shall be conducted annually at Station GCB, for all the constituents above, except for Whole Effluent Toxicity (WET).**
5. **Ambient, mixing zone monitoring shall be conducted in December through March, when stream flows are at or below 30 cfs.**

~~1. Sampling shall occur after the discharge pipe prior to flow into Gold Creek.~~

Notes on minor modifications proposed, page 5 of 53 of the permit:

1. Page 3 or 14 of Attachment 1 of the State's certification letter specified a limit for TAH.

2. Page 3 of 14 also required "'in-stream' receiving water confirmation monitoring". Re-phrased this as "mixing zone confirmation".

3. Items in bold are from the State's certification letter that had been left out of the permit.

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Table 1A- Effluent Limitations
Outfall 002

Parameters	Limits on Daily Discharge		Monitoring Requirements	
	Daily Maximum	Average Monthly	Frequency	Sample Type
Flow	-		Continuous Recording	
Aluminum	**-**	**-**	**Annual**	**Grab**
Arsenic	-	-	**Quarterly**	Grab
Cadmium	100	50	**Quarterly**	Grab
Copper	300	150	Annual	Grab
Iron	-	-	Annual	Grab
Lead	600	300	**Quarterly**	Grab

Table 1A- Effluent Limitations Outfall 002				
Parameters	Limits on Daily Discharge		Monitoring Requirements	
	Daily Maximum	Average Monthly	Frequency	Sample Type
Manganese	4635	--	Quarterly	Grab
Mercury, Total	2	1	Annual	Grab
Nickel	-	-	Annual	Grab
Selenium	-	-	Annual	Grab
Silver	-	-	Annual	Grab
Zinc	1500	750	**Quarterly**	Grab
TSS, mg/L	30	20	Quarterly	Grab
TDS, mg/L	9900	-	Quarterly	Grab
TAH, ~~m~~μg/L	10	-	Weekly	Grab
Turbidity[6]	**-**	**-**	**Continuous Monitoring**	
Sulfate, mg/L	6600	-	Weekly	Grab
Oil & Grease	No visible sheen		Weekly	Grab
Conductivity[6], mmhos	-		Continuous Monitoring	
pH, Std. Units	6.5 - 8.5		Monthly	Grab

CONTINUED NEXT PAGE

Table 1A- Effluent Limitations Outfall 002				
Parameters	Limits on Daily Discharge		Monitoring Requirements	
	Daily Maximum	Average Monthly	Frequency	Sample Type
1. Metals measured in Total Recoverable unless noted. 2. Units are μg/L unless noted. 3. Outfall 002 may only discharge when the receiving water flow is 30 cfs or greater. 4. Effluent sampling shall occur after discharge through the filtration plant and prior to discharge into Gold Creek. 5. **Ambient, mixing zone confirmation monitoring shall be conducted annually within 50 feet downstream of Outfall 002 for all constituents specified above, except for WET.** **6. If non-compliance or unusually high levels of turbidity or conductivity is detected, the filtration plant must shut down and cease discharge until compliance levels are achieved.** **7. The filter plant must be inspected twice weekly to confirm that all automatic equipment is functioning within limits. Use field test equipment to measure turbidity and conductivity of the discharge and compare with the installed equipment values to ensure that the filtration equipment is functioning properly. Record the flow quantity weekly.** **8. The filtration plant flow rate may not exceed 400 gpm.**				

~~2. Outfall 002 may only discharge when the receiving water flow is 30 cfs or greater.~~

~~3. Sampling shall occur after discharge through the filtration plant and prior to discharge into Gold Creek.~~

Notes on minor modifications proposed, pages 6-7 of 53 of the permit:

1. Page 7 of 14 also required "'in-stream' receiving water confirmation monitoring". This was re-phrased this as "mixing zone confirmation".

2. Items in bold are from the State's certification letter that had been left out of the permit.

C. Ambient Water Quality Monitoring Program Requirements.

1. Beginning May 1, 1998, and continuing monthly, the permittee shall conduct ambient ~~sampling and~~ monitoring for the parameters in Table 2 at three locations. The first location shall be upstream of the Gold Creek Drainage Tunnel, at Station GCR. The second location shall be Station GCB, which is approximately 300 feet downstream of outfall 001. The third location shall be Station GCF, approximately 20 feet downstream of Outfall 002.

TABLE 2	
Conductivity	Turbidity
Flow*	Temperature
* Flow shall be reported at GCF only	

2. Beginning June 1, 1998 and continuing quarterly, the permittee shall conduct ambient ~~sampling and~~ monitoring using grab samples for the parameters in Table 2A at the three locations specified in Part I.C.1. above. ~~The first location shall be upstream of the Gold Creek Drainage Tunnel. The second and third shall be downstream of outfalls 001 and 002.~~

TABLE 2A			
Arsenic	Manganese	TDS	**Acidity
	Zinc	**Alkalinity	pH
Lead	Sulfate	**Hardness	
* All metals shall be analyzed as Total Recoverable unless noted **Acidity, Alkalinity and Hardness shall be measured at the same time metals are analyzed			

3. Beginning May 1, 1998 and continuing annually, receiving water confirmation monitoring using grab samples shall be conducted for Outfall 003 (Ebner adit) **at Station GCF**, and shall be conducted for all constituents in Tables 1 and 1A, except for flow and whole effluent toxicity.

4. Beginning May 1, 1998 and continuing annually, receiving water ~~confirmation~~ monitoring shall be conducted using grab samples for Outfalls 004 (Alexander Adit) and 005 (“00" Adit) at Station GCR for all constituents in Tables 1 and 1A except for flow and whole effluent toxicity.

5. Beginning May 1, 1998 and continuing annually, the permittee shall conduct ambient ~~sampling and~~ monitoring using grab samples for the parameters in Table 2B as well as those in Table 2A ~~at three locations~~ stations GCR, GCB, and GCF. ~~The first location shall be upstream of the Gold Creek Drainage Tunnel. The second and third shall be downstream of outfalls 001 and 002.~~

TABLE 2B

Aluminum	Iron	Nitrate	**Alkalinity
Cadmium	Mercury, Total	TAH	**Hardness
Copper	Nickel	Oil & Grease (no visible sheen)	**Acidity

* All metals shall be analyzed as Total Recoverable unless noted
**Acidity, Alkalinity and Hardness shall be measured at the same time metals are analyzed

~~The location of the points downstream of outfalls 001 and 002 shall be submitted to EPA and Alaska Department of Environmental Conservation (ADEC) for review and approval within 15 days of the effective date of this permit.~~ Instream confirmation monitoring for Outfall 002 shall occur annually within 50 feet downstream of the point of discharge for all constituents specified in Table 2. Instream confirmation monitoring for Outfall 001 shall occur at Station GCB.

6. ~~Ambient sampling shall be conducted as grab samples.~~ Procedures developed in the Quality Assurance Project Plan (QAPP), permit part I.G., shall be used in handling, transporting and analysis of the samples. Quarterly sampling results shall be submitted with the DMR according to the following schedule:

Table 3	
Quarterly Testing Period	Quarterly Test Results Due
January - March	April
April - June	July
July - September	October
October - December	January